

Geosci. Model Dev. Discuss., referee comment RC2  
<https://doi.org/10.5194/gmd-2021-383-RC2>, 2022  
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## **Comment on gmd-2021-383**

Anonymous Referee #2

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Referee comment on "Impact of changes in climate and CO<sub>2</sub> on the carbon storage potential of vegetation under limited water availability using SEIB-DGVM version 3.02" by Shanlin Tong et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-383-RC2>, 2022

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The authors designed a suite of experiments well-suited to explore how plant individuals and communities have changed their growth strategies to deal with environmental change. However, the manuscript needs substantial rework. Most importantly, while the Introduction briefly mentions previous findings regarding shifts in above- and belowground allocation under environmental change, this should build up to a set of hypotheses that are then tested with the model experiments. It is also unclear why this was submitted to Geoscientific Model Development. Perhaps if it were more focused on comparing SEIB-DGVM biomass to observations it would fit as an evaluation paper, but the work performed is much more high-level than that. I thus think it would be more appropriate to move to Biogeosciences.

For these and other reasons that I will elaborate below, I think this manuscript should be reconsidered after major revisions and possibly moved to a different journal, if that's something Copernicus supports.

For more details and additional comments, please see the attached PDF.

Please also note the supplement to this comment:

<https://gmd.copernicus.org/preprints/gmd-2021-383/gmd-2021-383-RC2-supplement.pdf>